

## CLAIMS

I claim:

1. A method for detecting plagiarism comprising:
  - a) handing in a document to be reviewed which includes steps of
    - (1) receiving checker ID and checker password from an individual submitting the document to be checked,
    - (2) verifying checker ID and password,
    - (3) setting a current directory based on the checker password,
    - (4) submitting a document from the individual submitting the document to be checked to the checker,
    - (5) reading in the document submitted by the individual to the checker,
    - (6) storing each sentence in the document in an array of string variables,
    - (7) converting each sentence in the document submitted by the individual into a numerical value according to the formula

$$V = \sum_{i=1}^n (a_i)^2$$

where  $V$  is a numerical value assigned to each sentence in the submitted document,  $n$  is the number of characters in the sentence in the document submitted for which  $V$  is being determined, and  $a_i$  is the ASCII value of the  $i^{\text{th}}$  character in the sentence in the document submitted for which  $V$  is being determined, including

- (A) setting the numerical value of each sentence in the document submitted to 0,
- (B) squaring the ASCII value of each character in each sentence in the submitted document,
- (C) adding the values of the squared ASCII values together for each sentence in the submitted document to determine the numerical value to be assigned to each sentence in the submitted document;

- b) creating an archive for the checker based on the checker ID;
- c) creating a file for the individual submitting the document in the checker archive based on the checker ID including
  - (1) writing each sentence on an available line of

the file created for the individual in the  
checker archive, and

- (2) writing the numerical value of each sentence  
on a next available line in the file created  
for the individual in the checker archive;
- d) validating the file from the individual to the  
checker including
- (1) reading the checker ID,
  - (2) setting a current directory based on the  
checker ID,
  - (3) reading in all files from the current  
directory,
  - (4) displaying a list of all individuals that have  
submitted documents to the checker,
  - (5) selecting an individual from the list of all  
individuals to view a document that has been  
submitted by that selected individual, and
  - (6) displaying the document submitted by the  
selected individual in a rich text box; and
- e) checking the displayed document for plagiarism by
- (1) inputting the checker ID,
  - (2) setting current directory based on the checker  
ID,
  - (3) selecting an archive to compare the file

- submitted by the individual against,
- (4) reading in each document from the selected archive,
  - (5) setting a numerical value for each sentence in the selected archive according to the formula

$$V = \sum_{i=1}^n (a_i)^2$$

where V is a numerical value assigned to each sentence in the archive, n is the number of characters in the sentence in the archive for which V is being determined, and  $a_i$  is the ASCII value of the  $i^{\text{th}}$  character in the sentence in the archive for which V is being determined,

- (6) reading in and storing the numerical values for each sentence in the document being checked,
- (7) sorting the numerical values of all sentences in the document being checked using a comb-type sort,
- (8) checking for essentially identical sentences by scrolling through the sorted list,
- (9) comparing the numerical value of each sentence

in the document being checked to a numerical value for each sentence in the selected archive,

- (10) if the compared numerical value for a sentence in the document being checked is essentially the same as the numerical value for a sentence in a sentence in the selected archive, making a record that two sentences matched and continuing to check each sentence in the document being checked against sentences in the selected archive, and
- (11) reporting the number of records made during the checking of the submitted document.

- 2. The method as described in claim 1 wherein the selected archive includes other documents submitted by the student submitting a document to the teacher.
- 3. A method for detecting plagiarism comprising:
  - a) submitting a document to be checked;
  - b) placing a numerical value on each sentence in the document to be checked according to the formula

$$V = \sum_{i=1}^n (a_i)^2$$

where V is a numerical value assigned to each sentence in the document to be checked, n is the number of characters in the sentence in the document to be checked for which V is being determined, and  $a_i$  is the ASCII value of the  $i^{\text{th}}$  character in the sentence in the document to be checked for which V is being determined;

- c) selecting an archive against which the document to be checked is to be checked;
- d) placing a numerical value on each sentence in the archive according to the formula

$$V = \sum_{i=1}^n (a_i)^2$$

where V is a numerical value assigned to each sentence in the archive, n is the number of characters in the sentence in the archive for which V is being determined, and  $a_i$  is the ASCII value of the  $i^{\text{th}}$  character in the sentence in the archive for which V is being determined;

- e) comparing the numerical values of each sentence in the document to be checked against the numerical values of each sentence in the archive; and
- f) identifying sentences from the document being

checked that have numerical values essentially  
equal to numerical values of sentences in the  
archive.

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